DEVOTED TO AGRICULTURE AND ITS KINDRED ARTS AND SCIENCES.

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S. W. COLE, SIMON BROWN, } Editors.

FRED'K HOLBROOK, HENRY F. FRENCH, } Associate Editors.

TO OUR READERS.

In consequence of an impaired state of health, I have found it necessary to relinquish some portion of the care and responsibilities of the editorial department of the Farmer, but shall still continue to give particular attention to the examination and description of such fruits as shall be forwarded to this office, and to such notices and discussions of fruit, management of nurseries, &c., as may be considered interesting and profitable to the readers of the Farmer. S. W. Cole.

Chelsea, Nov. 1, 1851.

INTRODUCTION OF OUR NEW EDITORIAL CORPS.

BY THE PUBLISHERS.

There is said to be a plant called the *Century Plant*, which blossoms but once in a hundred years. If it were to bloom in our day, every one would run to visit it, for its rarity merely. It is only once in a generation that the *Publishers*, without the aid of *Editors*, write an article, and the occasion being rare, must secure to their production corresponding attention. The *Publishers* are presumed to be modest, diffident men, who, distrusting their own powers, are obliged to invite in the abilities of others to their assistance. But although, like the boy who blows the organ, they are usually out of sight, they have an important part to play, and indeed without them there would be very little *music*.

The old dramatists introduced into their plays, between the acts, a *chorus*, by means of which the audience were let somewhat into the secrets of the plan, and facts were announced which could not with a good grace come from the mouth of the regular actors.

In a similar capacity, do the Publishers appear on this occasion, to present to our readers, our new Editors, whose names to-day, for the first time, appear at the head of our columns, and by whose aid we hope to make the New England Farmer the best agricultural paper in the country.

As will be perceived from the card at the head of this column, Mr. Cole,—the state of whose health has been such for several months past, that it has been difficult for him to attend to his editorial duties,—will hereafter confine his attention to a more limited department of the paper. Not only on this account, but believing that the time has come when the farmers of New England demand a paper which shall combine a greater variety of talent and learning than we have heretofore been able to offer, we have been induced to make the change now to be announced.

Mr. Simon Brown, whose services are secured as principal editor with Mr. Cole, resides on his own farm in sight of the Battle Monument, in Concord, in this State, having his editorial office in this city. From his early childhood, first, as a matter of necessity, and ever since as a matter of taste, and of late as an exclusive business, he has given his attention to agriculture. The many occasions which have induced him to labor in the cause, with his pen and voice, have also taught him habits of close and accurate observation, and years of experience as editor of papers devoted as well to agricultural as literary and political objects, has given him facility and ease in communicating his ideas to the general reader. A residence of ten years in Washington, after a tour of observation through most of the States of the Union, gave him opportunities of learning, through conversation with persons from all parts of the country, the different ideas of those engaged in his favorite pursuit of cultivating the earth. To those who have attended the Agricultural Fairs in this and the adjoining States, the present and last seasons, Mr. Brown has no need of a new introduction.

As Associate Editors, we are happy to announce the names of Frederick Holbrook and Henry F. French, who will furnish regular contributions to our columns, under their own signatures, having no further responsibility than their own names warrant, for what we may publish.

Mr. Holbrook resides in Brattleboro', Vermont, is a sound, practical farmer, and has a well-earned reputation as a writer upon agricultural subjects. He has been called by the farmers of his State to preside over their State Society, and is thoroughly imbued with a sense of the importance of rural occupations, and of the necessity of a more systematic and careful cultivation of the soil. His occasional public duties afford him opportunities for communicating with the best farm managers from every part of his State. With these facilities, combined with his judicious operations on his own farm, and with an accuracy of observation which retains whatever is useful, while it rejects mere fancies and theories with an equally sound discrimination, we believe him to be eminently qualified to contribute to the columns of the Farmer.

Mr. French resides in Exeter, N. H. As he informs us, he is by profession a lawyer, and is desirous that his *practice* may continue to correspond with his profession; that he devotes some time and attention to his farm, as an amusement to himself and as means of usefulness to those who are inclined to profit by an example of a thorough system of cultivation in some of its branches. He has been conversant with farm operations from his youth, still continues to take a deep interest in them, and especially to promote their advancement into well-defined scientific operations. All who have read his writings in the pages of the Horticulturist, and other papers, will find abundant evidence of his practical knowledge and ability, as well as of his easy and agreeable style. His articles upon "Fruit and Shade Trees," have not only been copied into most agricultural papers, but into many others. With the remark that he is Vice President of the New Hampshire State Agricultural Society, we consider him sufficiently introduced to our readers.

It gives us pleasure to say that we have made arrangements to receive occasional aid from Professor T. W. Harris, of Cambridge, the distinguished Entomologist, author of the excellent work on "Insects Injurious to Vegetation," &c.; —from Dr. Charles T. Jackson, chemist, geologist and State Assayer, a gentleman most intimately acquainted with chemistry in all its relations to agriculture;—from Col. M. P. Wilder, of Dorchester, a celebrated Pomologist, and most zealous and liberal contributor to all that tends to promote agricultural interests;—and from Mr. Wm. Bacon, of Richmond, Berkshire County, whose articles in the Farmer, heretofore, have been extensively copied and are always plain and practical.

Messrs. J. W. Proctor and S. P. Fowler, of Danvers, and Dr. Silas Brown, of Wilmington, whose communications will continue to give value to our columns, are names already familiar to the reader. Dr. Geo. H. Dadd, editor of the "Veterinary Journal," and author of the "American Reformed Cattle Doctor," will write on subjects relating to his profession.

We have the assurance of occasional aid from Joseph G. Hoyt, of the Phillips Exeter Academy, (N. H.,) a gentleman of high scientific and literary attainments, who always knows well what to say, and says well what he knows, especially upon agricultural subjects. His grounds, which in a few years have become from almost a desert a delightful and productive garden, by the *labor of his own hands*, bear witness to his *practical* as well as theoretical knowledge.

Richard Kimball, Esq., of Dover, N. H., has also given us liberty to promise our readers an occasional article from his pen. He is well known as an ardent and successful tiller of the soil, and withal as a gentleman who holds a pen or plow with equal grace.

Many other gentlemen who have been occasional contributors, we trust will continue their favors. Among them in this State, are Messrs. Horace Collamore, and Morrill Allen, of Pembroke. The latter gentleman is an able writer, a thorough cultivator of the soil, and has justly received the title of *pattern farmer*, from excellent judges. In Maine, Rufus McIntire, Esq., Parsonsfield. In Vermont, John M. Weeks, Middlebury. With the talent thus secured every part of the *Farm*, the *Garden* and *Workshop*, will have a practical and competent teacher.

Having thus attempted the duty announced by us at the outset, we retire once more to our private position, leaving our friends, whom we have presented, *to speak for themselves*, with the hope that their intercourse with our readers may long be pleasant and profitable; and uninterrupted by any event which may require so unusual an effort as an editorial article by The Publishers.

POULTRY EXHIBITION.

The third annual exhibition for the improvement of Domestic Poultry will be holden over the Fitchburg Railroad Depot, Boston, on Tuesday, Wednesday, Thursday and Friday, the 11th, 12th, 13th and 14th of the present month. There will undoubtedly be a large collection of birds of every wing presented, and those interested in the subject will find opportunity to make such comparisons and examinations as they may desire. The regulations adopted by the Society are circulated in their bills, in which all who desire it may obtain further information.

☞ Sidney B. Morse, Esq., of Burlington, Mass., informs us that he has purchased one of W. W. Willis's Patent Stump Machines, and that it may be seen in successful operation, at his place, removing both stumps and large rocks. The important value of this machine has been previously noticed in our paper, with an accompanying cut.

FARM WORK FOR NOVEMBER.

Old Boreas, with all his attendant train of wind, hail, sleet and snow, will soon be along to take his turn to "rule the varied year." The farmer must be ready to give him a cordial reception, rather than shrink from his rough embrace. If all is tight and snug, and your preparations have been carefully made, winter will hardly approach with a gloomy and chilling aspect; but rather as a season for mental improvement and social enjoyments; for the interchange of civilities with neighbors, and for strengthening the cords of fraternal love.

Look well to your cellars,—point with mortar about the underpinning of both house and barn. Your house rooms will be more comfortable for it, and require less fuel—with a tight barn cellar you will prevent your manure from freezing, and thus gain two or three months in the process of decomposition in your coarse materials. See that your apples in barrels are kept dry in cool places, and house them before the cold is so severe as to touch them with frost.

Crops.—Finish gathering all your crops—corn should be thoroughly separated at the time of husking, allowing no ear that is not fully ripe to be deposited with the winter supply, however large and fair it may appear; gather roots as the leaves become dead—those with green leaves will continue to grow till late in the month with favorable weather—handle them carefully, and deposit them in moderately sized bins or heaps, in dark places, and they will escape mould and rot.

Stubble Ground.—Manure stubble ground with a liberal hand—green, coarse manures are excellent, don't spread them over too much surface, but manure liberally as far as you go, and plough in deep; during the winter they will decay, give out their ammonia, which will permeate the superincumbent soil, and in the spring you will find a light, porous, pliable soil, ready to return you an abundant crop; this work will save much time in the spring when your hours are more valuable.

Winter Grain.—Examine your fields where winter grain is sowed, and wherever it is practicable cut trenches sufficient to draw off the water which otherwise would stand in low places, and destroy the young plants.

Barn Yards and Cellars.—Bed your open yards well with refuse hay, weeds, straw and muck, ready to receive the droppings of the cattle—between the coarse herbage and the muck add a little lime. Store up meadow mud or loam in the barn cellar to be mingled weekly with the fresh droppings of the stall through the winter.

The Garden.—November is a good time to clean out and manure strawberry beds—cover them, if convenient, with coarse herbage or brush of evergreens—give the asparagus beds a rich coat of manure. Currants, raspberries and gooseberries may be transplanted this month with success if the work be well done. The red and white Antwerp should be protected. Throw out a spade full of earth from one side of the plant near the roots, and this will enable you to bend it down over the hole without injury, when it may be covered with straw, or such other materials as can be spared. This may be omitted until near the close of the month if the weather is mild. Trim and tie up native raspberries—cut out all of the present year that bore fruit, shorten in the tops of the new plants and tie the hills to a stake or trellises.

This month affords favorable opportunities to lay out the garden—that is, to arrange your beds, paths, make hot-beds, and decide where your young trees—shrubbery, beans, peas, early potatoes and other vegetables are to be placed—this may all be arranged upon paper during the winter, and thus give you a map of garden operations. This map will be found of service in the hurrying hours of planting and sowing, by showing at a glance the spot selected for the various trees and seeds it is intended to plant.

If not done before, examine your young trees, where you budded, and loosen the ties, or take them away altogether.

If the trees stand in a soil somewhat heavy and liable to be thrown up by the frost, scatter straw, refuse hay, corn butts, or the branches of evergreens about them.

Sow pomace if you desire to increase your nursery. See that your cherry, apricot and peach stones are well mixed with sand and deposited in the cellar.

No injury to the tree has ever been experienced by us in heading in peach trees in autumn. It may be done quite early in the spring; but the winds are cold and boisterous in March, and the ground covered with snow, or wet and muddy, so that the job then is altogether an uncomfortable one. Being annually headed in, by cutting off one-half of the previous summer's growth, the tree gradually assumes a round and compact form, produces larger and better fruit, and the branches will seldom break down when loaded with either fruit or ice.

Canker Worms.—Not a moment is to be lost in protecting your trees against these pests. They have already commenced their march up them, and will soon be out of your reach. If you have any better remedy than a circle of tar around the tree, use it; but if not, apply that at once. For a description of the modes of application, &c., see the Farmer for November, 1850, page 401, in an article by S. P. Fowler, Esq., of Danvers.

Around your newly transplanted trees raise a mound of the surface soil 12 or 18 inches high. This will prevent the rain from standing about their roots, and steady them through the winter, so that the winds will not rack them out of place.

These are but a few suggestions or catch words;

the systematic farmer or gardener, will find plenty of employment in all seasons of the year. Individual cases may appear trifling and unimportant, but in the aggregate these little matters are really what go far to distinguish the systematic and thrifty husbandman.

AN HOUR IN THE HORTICULTURAL ROOMS.

The towns in the vicinity of Boston produce as large, beautiful, and highly-flavored fruits, as can be found in any other portion of our country. The unfavorable influences of cold climate have, in a considerable degree, been overcome, and fruits which a few years since it was found very difficult to produce at all, are now grown in perfection and abundance. It was supposed that the best of our native grapes, the Isabella and Catawba, could not be successfully cultivated in the open air; but the exhibitions this fall show that some mode of cultivation has been found to produce them in a very high degree of excellence.

At the Horticultural Rooms on Saturday, we saw the Frogmore Grape, by Geo. W. Robinson, of Somerville. The branch weighed 3¼ pounds, and was made up of 6 or 8 bunches, very much resembling fine specimens of the Isabella, but all attached to one general stem. Several specimens of *Black Hamburg*, side by side, presented a very different appearance; some of them answering to their name by being very dark, and covered with bloom, while others were purplish, and almost transparent. A dish presented by B. D. Emerson, of Jamaica Plain, were very large, purple, and *looked* delicious. A plate of the *Diana*, with their pale greyish red, were very attractive—presented by G. H. Hutchings, Boston. Several lots of *Isabella* and *Catawba*, by C. E. Grant, Mt. Pleasant, Roxbury, gave plenty of evidence that they may be successfully cultivated in the open air.

A plate of *Peaches*, gathered on the 20th Sept., and preserved by the discovery of D. F. Curtis, were presented by A. W. Stetson, of East Braintree; they were quite plump and fair, being only slightly shrivelled on the stem end.

But the Pears afforded the chief attraction. The *Dix Pear*, from Josiah Stickney, Watertown, were very fine. This pear is one of the highest excellence. The *Glout Morceau*, by Jonathan Mason, Jr., is an excellent winter pear, and was nearly as fine looking as some of the more delicate autumn fruit. There were some exquisite specimens of the *Duchesse d'Angouleme*, by S. Downer, Dorchester, and beautiful samples of the *Buerre Diel*, by M. P. Wilder, of Dorchester. J. Fisk Allen, of Salem, presented a dish of the melting *Seckel*.

We noticed some large and fair *Quinces*, and one which weighed two pounds.

There was but one lot of *Apples*, and that was a basket of the *Hubbardston Nonsuch* from John B. Moore, Concord, and one of the handsomest specimens we ever saw. The fruit was large, clear, and very highly colored. This apple has been in demand in the market this fall, and brought a high price.

We advise all lovers of good fruit, and all who entertain doubts as to success in producing it, to call at the Horticultural Rooms in School Street and become convinced that the thing is thoroughly understood by the cultivators in the vicinity of Boston.

ACKNOWLEDGMENTS.

From H. J. Mead, Cornwall, Vt., some seedling apples, medial size, fair, handsome and of good quality.

From E. W. Bull, Concord, some native grapes from Scituate, large size and fair quality.

From Albert Bresee, Hubbardston, Vt., pears for a name. This pear strongly resembles the St. Michael, excepting it differs very much in color in having much cinnamon about it. It is of the very highest quality. We think it is the Gray Doyenne, which resembles the St. Michael, but is a little later, of a higher flavor, more russett. Like the St. Michael, it fails on the sea-coast in New England, but flourishes well in the interior. Also, some fine apples, large size and fair, of excellent quality. We should think they were well worthy of cultivation. We think the russett is not the Boston or Roxbury Russett, but we cannot judge from a single specimen, as they vary very much on the same tree.

From Wm. O. H. Gwynneth, Portland, Me., a box of apples containing a variety of specimens for a name; mostly too hard for present use; that marked No. 7 is a very handsome variety, of excellent quality, and is probably the Gravenstein; but it is hard judging of fruit from single specimens.

From G. W. Harrington, Watertown, specimens of large, handsome apples, quality pretty good.

From S. W. Dame, Ludlow, Vt., apples for a name. They are probably the Queen Anne; it is cultivated in this region to a small extent, owing to its being a small bearer. As it is large, very fair and beautiful, it sells well in the market, though of medial quality.

HOVEY'S MAGAZINE.

The October number of this popular magazine contains descriptions and engravings of select varieties of Pears, an exceedingly interesting paper on Market Gardening around London, and a pleasant and useful variety of Miscellaneous Intelligence. It has now reached its two hundred and second number, and its old age is as green and vigorous as some of the beautiful plants which it discusses.

☞ There is no condition that does not sit well upon a wise man.

For the New England Farmer.

UNDER-DRAINING.

BY HENRY F. FRENCH.

There are parts of almost every New England farm, which might be improved at trifling cost, by under-draining—places, perhaps, in the mowing-field, on the hill sides, where the water, slowly oozing out upon the surface, produces a growth of wild flat grass, ornamented with an occasional bunch of brakes, and now and then a clump of alders, making an excellent cover for woodcock, and a pleasant summer residence for frogs, but giving no valuable crop to the farmer.

Often, this water has a mineral tinge, as if there were oil upon it, and sometimes it deposits a reddish sediment like iron rust.

When this is the case, it seems to act like poison, upon all valuable plants. This substance is *sulphate of iron*, and frequently, by digging two or three feet in such localities, the subsoil, even in sandy land, will be found cemented together like stone, and entirely impervious to water.

These wet spots are usually the outlets of *springs*, and springs are no more nor less than rain water, which, falling upon the earth, has encountered either rock or clay, or something else which checks its passage downward, and so passes along until it finds vent upon the surface.

And frequently we see on fields nearly level, *hollows* or *basins*, in which water stands in the early part of the season, preventing the proper working of the soil, and rendering barren, the deepest and richest portions of the whole farm. And then we have *swamps* and *bogs*, into which the uplands have for centuries, poured treasures of fertilizing elements, but which are given over to desolation, by reason of too much *cold water*, a liquid which is far more injurious to land, than to the owner!

To remove this surplus water, in the cheapest and best manner, constitutes the whole science of draining.

Before suggesting the mode of under-draining, it may be well to explain why water thus flowing *through* the soil, produces effects so disastrous, while, as is well known, nothing better promotes the growth of plants, especially of grass, than irrigation, or water flowing *over* the surface. All plants require *air*—atmospheric air, such as we breathe, and especially do they require that element of air, which is called *oxygen*. Without it, no seed can germinate, and no living thing can flourish.

If plants do not breathe like men, they, evidently, do something very similar.

Some plants require more air, while vegetating, than others. Potatoes and corn are *drowned*, if the ground above them is covered with water, for even a few days, after they are planted. Most farmers have lost their crops in this way. Now, rain water, or running water, by absorption from the atmosphere, is constantly supplied with oxygen, and readily imparts it to vegetation, while stagnant water soon becoming exhausted of this essential agent, excludes the air from the roots of the cultivated plant, and so *drowns* it.

Rain, falling upon land filled with stagnant water, produces no good effect, because it cannot penetrate, but is at once thrown off, while upon land properly drained, it passes downward through the soil, carrying the ammonia and other fertilizing agents, which it has collected in falling through the atmosphere, to the roots, while the pure fresh air is, as it were, *sucked down* to fill the place of the descending water.

The great object, in draining small tracts, is, to cut off the water, *before* it has done its mischievous work—*before it has come out to the surface*, and give it a harmless course from our territory. And here lies the great error, observable everywhere, among those who are inexperienced in draining, that instead of preventing the evil by meeting the enemy at his own head quarters, they suffer him to overrun their domain, and then give him a free passage onward.

Although one might suppose it quite unnecessary to suggest that water is inclined to run down hill, yet that circumstance seems to be often overlooked. It is a very common error to run drains through the *lowest* part of a meadow *only*, so that the water is taken off after it has worked its way slowly from the upland *through the soil*, and not before. Water usually runs down hill, and it runs down, on the subsoil of clay, or gravel, after the surface soil is saturated, precisely as upon the surface, though less rapidly, and no man in his senses, if he desired to turn from his land a visible stream, which ran through it, would turn it at the bottom instead of the top of his field.

The water which creates the bog or spring comes, of course, from higher land. Usually, the under hard stratum, or subsoil, has the same dip or inclination over a large extent, so that water will be found to flow but in one direction. Even in deep valleys, springs will be found to come principally from the hills on one side only.

Having observed out of what upland or hill, and from what direction the surplus water proceeds, it is necessary next to ascertain by digging how deep lies the stratum of clay or gravel, or other subsoil, upon which the water rests. Some such subsoil there must be, unless, indeed, the level of some stream or pond is reached, or the water would follow its natural course down into the earth, and not appear on the surface. Drains should be laid *across* the course of the water, and opened deep enough to cut a few inches *into* the hard subsoil, so as to intercept the water flowing upon it; otherwise the water may continue its course across the drain. Three feet is a convenient depth for under-drains, and by digging a few holes, at different distances from the upland, before staking them out, the subsoil may be reached, and the flow of water cut off at any desirable depth. It is, sometimes, found necessary to ditch entirely round a meadow or run, and if it be extensive, to open a drain also, through the centre or lowest part. Sometimes a spring bursts up from below, the fountain of which cannot be cut off by a drain near the upland, and which may require to have merely an outlet; but a little thought must satisfy us, that draining through the low parts *alone* cannot effect the object in view.

An under-drain may be opened as narrow as is convenient for the workmen, and with perpendicular sides. It should have a fall of three or four inches to the rod, that it may not so readily clog. As tiles of brick are not yet in use with us, we must make use of the best materials at hand.

Small stones of any form, are perhaps the best substitute for tiles, and if the drains have a proper fall, they will answer the purpose very well, thrown in at random.

But it is a safer method, if stones of proper size are to be found, to place two rows of them, with some care, at the bottom, so as to leave an opening of three or four inches between them, which may be covered with another course. Or if *flat* stones are at hand, they may be set on edge on the bottom, with the tops resting together, leaving a triangular opening. When the bottom course is properly laid, the drain may be filled to within eighteen inches of the top, with stones of any size, and levelled up with earth. It is advisable, before throwing in the earth, to cover the stones with turf, straw or small bushes, to prevent the surface water from breaking in.

If Providence has not bestowed upon you this *doubtful* blessing of plenty of stones, *bushes* may be used as a substitute. Place at the bottom of the drain *poles* of two or three inches diameter, to the depth of six inches, then fill with any bushes which it is desirable to put out of sight, treading them in as compact as possible, that they may not afterwards settle; and cover and fill up as when stones are used. I have laid drains in this manner, which have operated perfectly for eight years, and bid fair to be serviceable for a generation to come.

The obvious advantage of close or under-drains over open or surface drains, is, that they offer no obstruction to the cultivation of the land. You may team, plow, subsoil, mow and rake, precisely as if no drain were below.

Besides, there is no waste of land, and no labor of clearing out is required.

The few hints which I have thrown out may, it is hoped, be of some service to those who are making their first experiments in this essential branch of improved husbandry.

Having given some attention to experiments in draining, I shall be happy to reply to any inquiries which may be made on the subject, through the columns of the New England Farmer. In this, as in all other operations upon the soil, success depends upon understanding in the outset, the *theory* as well as the mere *hard labor* of the process, and a free interchange of opinions, among those engaged in kindred pursuits, is the best means of diffusing useful knowledge. H. F. French.

Exeter, N. H., Nov. 1, 1851.

For the New England Farmer.

PEARS ON QUINCE STOCKS, &C.

Mr. Editor:—Will you be so kind as to answer a few questions in the Farmer?

1st. Mr. Barry, in his catalogue of fruit trees, says the *common* quince is entirely unfit for pear stocks. What kind does he refer to? Do you think any kind of quince unsuitable? Which kinds do you consider best for this purpose?

2d. How are Paradise stocks raised? If from seeds, where can the seeds be procured?

3d. If the seeds of the Siberian Crab Apple are sown, will they produce trees smaller than other apple trees? B. Marston.

Hampton, N. H., Oct. 10, 1851.

Remarks.—The quince is only fit for stocks for the purpose of making dwarf trees. The trees usually bear young, and are short lived; and are not well adapted to extensive culture, but rather for the garden and small lots. The Portugal is considered the most vigorous grower in stock; but some nurserymen say the apple grows just as well and is adapted to the pear stock. There are other nurserymen who make no distinction and consider the pear quince as good as either of the other two. If any of our readers have made definite experiments upon this subject, and can communicate useful information to the public, we should be pleased to receive it for publication.

Paradise stocks are raised in Europe from seed. It is a native of that country and the seed cannot probably be procured here.

As to the size of the trees from the seed of the Siberian Crab Apple, we do not know; but it is a general law of nature, that like produces like. In most all cases, seed from slow-growing fruit trees produce slow growers; and seed from small or dwarfish fruit trees produce trees comparatively small. We have confirmed this fact in numerous cases.

For the New England Farmer.

ACORN SQUASH.

BY PROFESSOR HARRIS.

Gentlemen:—Permit me to recommend a winter-squash, which is new to me, and probably is but little known in this vicinity. The seeds came from Shrewsbury, where the fruit was raised in the summer of 1850, and was there called the acorn-squash. Of its origin and history nothing further is known to me. Its characters, as grown in my garden this summer, are these. The vine runs prodigiously, throwing out strong tendrils and even roots from its joints, and enormous leaves, many measuring twenty inches in length, and as much or more in breadth. These leaves are unlike those of the pumpkin and common kinds of winter-squash, being of a rounded heart-shape, and not divided into lobes, but marked with five rounded scallops on the outer edge, and ending with a very short point in the middle of the largest curve. The smaller leaves, however, which are produced late in the season, near the extremities of the vines, are five-angled, or slightly five-lobed. The flowers are wide in the throat, where they grow out of the young fruit, and have at least four and sometimes five stigmas; whereas, in the common pumpkin and winter-squashes, the stigmas are rarely more than three in number. When the flowers and the five narrow calyx-leaves drop off, they leave, at the place of their origin, a depressed ring-like scar, of a large diameter, in the centre of which ring there is a little tubercle, formed by the adhering base of the style. In this stage, the fruit somewhat resembles a huge acorn surrounded by its cup, which seems to have suggested the name it bears. As it increases in size, the circular ring enlarges also, and, in the full-grown fruit, measures four inches, or more, in diameter, the part within the ring forming the apex of the fruit, growing equally with the rest, and being marked with dark green lines radiating from the little knob at the summit. At maturity, this squash weighs from eight to ten pounds or more, and measures about two feet and eight inches in circumference, and five inches in its shortest diameter, or from the stem to the blossom end. It is depressed at the stem-end, and from

its squat shape, and the singular formation of the upper end, it may be compared to an old-fashioned tea-kettle, the blossom-end with the ring representing the lid. The color of the rind, at first green, subsequently varies from slate-blue, mottled and striped with yellow, to deep yellow. The surface in some is perfectly smooth, or only furrowed and puckered round the top, in others more or less rough, with slight elevations like a nutmeg-grater. The flesh is very thick, firm, and fine-grained, and of a rich orange-color. The carpels or seed-cavities, four and sometimes five in number, contain double ranges of large plump seeds like those of the marrow squash. The fruit-stem, like that of the latter, is short, thick, more or less obliquely inserted, nearly cylindrical, and not five angled, nor deeply furrowed. A good idea of the form of this squash may be got from the middle figure on page 283 of the volume of the "Library of Entertaining Knowledge," treating of "Timber-trees and Fruits;" and this figure may have been designed to represent our acorn-squash. In cooking, both when plainly boiled and when made into puddings or pies, this squash fully equals the very best of the marrow squashes.

The vines, like those of the marrow and other delicate squashes, are liable to be attacked by borers at the roots, before the fruit is half grown; and, if neglected at this stage, will almost certainly perish. The remedy, after extracting the borers with a wire, or killing them in their holes, consists in pegging down the vines at the joints with forked sticks, and drawing a little earth around these joints, which will encourage the formation of roots there, whereby the whole vine will be sustained, even after its original roots have been nearly destroyed. Yours, truly, H.

For the New England Farmer.

WATER CISTERNS---OLD ORCHARDS.

Mr. Editor:—In your paper of Sept. 20, there is an article taken from the Germantown Telegraph, on "water cisterns." I wish to build one for myself which will hold some 800 to 1000 gallons for storing rain water. The writer directs to excavate a hole in the ground of sufficient capacity, then to coat the sides with cement, &c. What I wish to inquire for through your valuable paper, more particularly is, in regard to the manner of working the cement, thickness of the wall, putting it on, &c. (*a.*) The writer states the cost of a barrel of cement or water lime, to be $1,30 at that place. (*b.*) I wish to know the cost at Boston, where it can be procured, the manner of making the mortar, and what other materials to use with it.

(*c.*) I have an orchard which has been set out some 30 years and has been grafted some four or five years. It is a very good one, but about one-fourth part of it is dead, or has been thinned out in the course of the last twenty years; the soil is in a good condition and it bears well. I wish to inquire if it will be profitable to fill it out with young grafted trees, provided I manure according to Mr. Cole's Fruit Book. An answer to the above inquiries will be thankfully received. E. Camp.

Chelsea, Vt., Oct. 18, 1851.

Remarks.—*a.* The cistern may be made in a clay soil by laying the cement, coat after coat, on the bare sides of the excavation. We know of many made in this way which have been in use a number of years, and stand well. It may also be stoned up, and cemented. But the neatest and surest way is to use bricks. The cement should be mixed with two parts sand, and a little at a time, as when properly tempered it sets very quick. Cover the bottom of the hole with two or three coats, and lay the bricks flat; upon reaching the sides, set the bricks forward so as to leave a space of half an inch between them and the earth, and after raising a foot fill in with cement mixed with six or seven parts of sand, and so thin as to be turned in from a bucket—what is called puddling. The cement should be applied to the walls in thin coats, until it reaches the thickness of common plastering in the walls of houses. If the top is turned, leaving a hole the size of a flour barrel in the apex, the cistern will be neater and stronger than if left flat. This may be done by laying planks across the top of the walls where the turn commences, filling with shavings, and building upon them until the barrel is reached which is placed in the centre at the top. The whole may then be covered with earth so as to prevent freezing, and be walked upon and driven over without injury.

b. The cement may be purchased of the lumber dealers in this city, at from $1,50 to $1,75 a cask. It is the common hydraulic cement, and no other materials are used besides the sand and water.

c. Your old orchard may be improved by filling up the vacant spaces with young trees if the old ones are some twenty-five or thirty feet apart, and setting them as we have suggested in another column. You would be compensated by cultivating the whole orchard—at any rate the young trees will do nothing without it. Trim, scrape and wash your old trees, apply manure plentifully this fall and plow it in—keep cattle and borers from your young ones, and you will soon find an ample reward for your labors.

For the New England Farmer.

AGRICULTURAL SCHOOLS.

Mr. Editor:—Thinking you would be likely to know about the agricultural schools, in different States, where situated, and by whom governed, I take the liberty to ask of you through your columns, or otherwise, for any information it may be in your power to give. And I do not doubt but it will be agreeable to other of your readers as well as myself. Could I hear from you in your next number it would be very gratifying.

Yours, truly,

G. Tillinghast Hammond.

Newport, R. I., Oct. 6th, 1851.

Remarks.—There is not, to our knowledge, an Agricultural School in the country. We believe there is a school in Pennsylvania, called "The Mount Airy Institute," where the practical part of

Agriculture is taught, in connection with the common branches of education. We earnestly hope to be able to give a better account than this of agricultural schools before our legislature closes another session; so far, at least, as to see some of our men of practical, as well as mental, acquirements, in a situation to impart their information to the thousands of hungry minds waiting to be fed from their fountains of knowledge. Will the editor of the Germantown Telegraph give us some information in relation to the Mount Airy, or any other school where agriculture, as a science, may be learned.

For the New England Farmer.

THE POTATO—ITS PROCESS OF VEGETATION.

BY J. LEE.

Mr Editor:—When digging my potatoes, I have observed, with special care, the manner in which the vines, roots and tubers grow from the parent potato. The planted parent tuber I find has, in all cases, propagated vines, roots and tubers from only one end, that from which the first sprouts start in our cellars, at the return of spring; and it is the end or section of the tuber opposite that to which the original stem grew, connecting the tuber with its parent. The whole growth from a single potato I find also joined to it, sometimes only at one point, sometimes at two, and never at more than three, and these in close proximity. The whole propagation has proceeded from one, two, or three *eyes*, as they are usually called. The old tuber, in some hills, is found wholly decomposed, except its pellicle, and in such instances the yield is greatest. Some old tubers are partially rotten, through natural decay, and others remain in their original shape and form, but light and watery. *From one to three eyes only* actually vegetate from the largest potatoes I have thus inspected, the others remaining inert. At these single points the parent tuber has expended its strength, and the substance of it has been exhausted, and doubtless the whole tuber has had an important office to perform in the product resulting. If the parent tuber has been decomposed and lost in the progress of vegetation, through the season, I am convinced that it has not been useless, and therefore, that the practice of cutting apart potatoes before planting is unwise and unphilosophical. And the corky, or rotten, or watery, lifeless state of many parent tubers, indicates that they must have parted with important qualities in the vegetating process, necessary for the healthiest and fullest production of the new tubers.

There are two kinds of roots propagated in the growth of the potato. The first is fibrous, and shoots downwards and laterally, and loves to find a deep, friendly subsoil, allowing them to penetrate beyond the reach of droughts. These are sustaining, absorbent roots, essential to the life and growth of both the vine-stalks and of newly formed tubers. The other kind of branching roots propagate tubers, and shoot out from the main root, near its junction with the parent tuber, and grow to different lengths sometimes in good soil to the distance of twelve and even eighteen inches, and always terminating in a tuber which they feed. Frequently, a young tuber sends out a root from its extremity, and this propagates one or more tubers, or else the root protrudes from the ground and forms a vine. This demonstrates that *the tuber-producing roots are of exactly the same nature as the vines.*

Last May, I planted a potato which had been dug in the fall of 1849, eighteen months before, and which had been under a box during the summer of 1850. In that position it had propagated several small branch-like vines, upon which were formed a large number of little tubers, of the size of small peas. It had been exposed to the air of the cellar, through the preceding winter, in that germinant state, and thus was planted the parent with its offshoots. The vines grew thriftily, and upon digging, I found *forty-two* tubers had grown in the hill, all small, and yet differing in size, proportionally to the size of the small tubers planted. They were evidently the same tubers that I planted, only expanded by vegetation. Thus the *suspension* of growth did not prevent them from resuming the original process of vegetation when placed in the ground, and in a condition favorable to the vegetating tendency, which began to be developed twelve months before the time of planting: I infer that the principle, that the rot of potatoes arises from the decay of vegetable life in the parent tubers, is groundless. I also infer that the small growth of these tubers, was occasioned by the exhaustion of the parent tuber, in its vegetating efforts in the cellar, during the summer of 1850. It had become cork like and dry when I planted it, and therefore its offspring depended for their aliment upon new fibrous absorbent roots, shooting into the soil from the tuber roots.

My observations upon the depth to which the absorbent roots of potatoes are inclined to penetrate, convinces me that they demand a deep permeable rich soil for their greatest productiveness. The number of tubers is greatly aided by a soil best suited to the extension of tuber roots, and by broad, mellow hills. One peach-blow potato's tuber root penetrated, in my garden, six or eight inches below the parent, and there formed the largest tuber of the whole crop. Why? On inspection, I found a quantity of loose limestone sand just around and beneath it. A fact I hope to remember for future experiment. J. L.

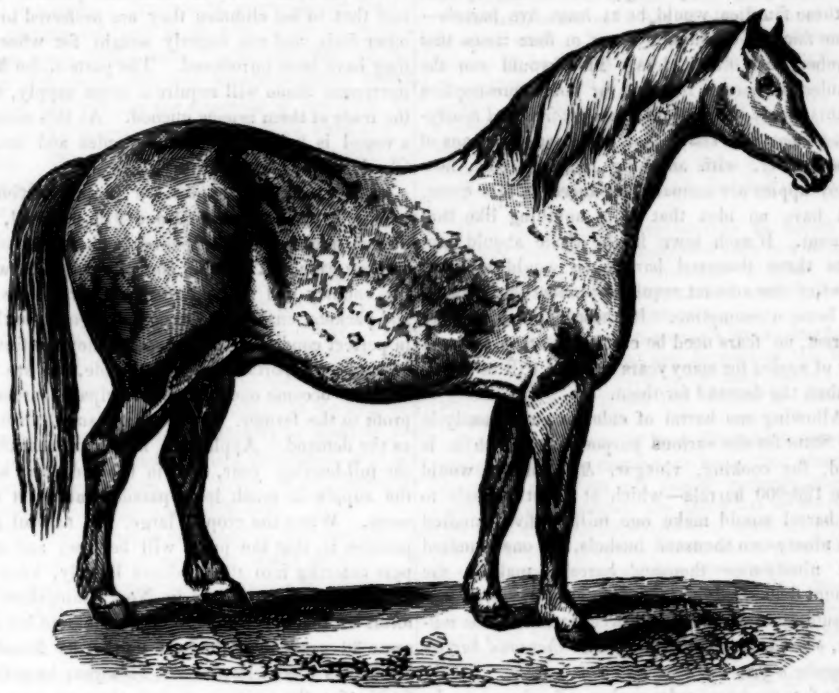
Salisbury, Conn., Sept. 27, 1851.

Remarks.—We bespeak the especial attention of our readers to this communication, and beg of our correspondent a continuance of his favors.

EXTENSIVE FARMING.

The most extensive farming operation probably ever entered into in any country, has been successfully carried through in California during the past autumn and winter. We allude to the speculation of Horner & Co.

Day before yesterday the last sack of the potato crop was sold, and the gross proceeds of this crop have amounted to $178,000—yield of 130 acres! There have been eighty hands employed on the rancho, and the total expenses of carrying it on, during the season has been $80,000. The sacks (gunny bags) in which the potatoes have been shipped cost about $8,000, while the gross receipts for the total crop of the rancho have amounted to $223,000—*Sacramento Transcript.*



THE ENGLISH DRAFT HORSE.

The engraving of this noble animal has been procured by us at considerable expense, expressly for the columns of the Farmer. This is a perfect portrait of the animal to which was awarded the first prize of the Royal Agricultural Society at Derby, in England. He is considered by Colman as the horse best suited to agricultural purposes; of middling size, a compact form, short, strong and muscular limbs, full-breasted, and with round buttocks, of which the above plate affords a favorable representation. At the time the prize was awarded, it was said, by some person present, that he claimed to have some knowledge of the animal, having long been in the habit of witnessing his performances on occasions when strength of limbs and compactness of form were alone to be depended upon for heavy drafts; often having seen five such in a team, striving at a stalled load, so that the driver has stepped over their backs, as they lay almost extended on the ground; when, if the load would not *come*, it was only necessary for him to say "try again," which they would do ten times in succession.

There is yet much room for improvement in our breeds of horses, and it is hoped that more attention will be given to the subject. The expense of keeping an indifferent animal is as great as that of keeping a good one, while his services are only of half the value.

APPLES — MARKETS.

Of all fruits produced in New England, the apple is the most easily raised, the cheapest, the most durable, is capable of being used in more ways as an article of food, and is, probably, the most wholesome and nutritious. There is no family where they are not used to a greater or less extent, and very few families, where three or four times the present quantity would be consumed, if they could be purchased throughout their season for about fifty cents a bushel.

Sweet apples, where they can readily be obtained, and at low prices, have become as common an article of food upon the table, as the potato; and since the high prices of potatoes have prevailed, have been more extensively used in some districts than the potato itself. In one of the small towns of this State, but one which produces much more than the average quantity of fruit, a gentleman states that the amount of apples produced is about ten thousand barrels, and that this product is not more than the inhabitants of the town would conveniently use themselves. The farmer, however, must turn some of his produce into cash, and finding the apple in demand, sells a large proportion of what might profitably be consumed in his own family at home.

The population of the State of Massachusetts is 994,000 persons; allowing five persons to each family, that being the usual allowance by statisticians,

and that number would give 199,000 families. The average quantity of apples consumed by each of these families would be at least five barrels—some families consuming three or four times that number, and others, less. This would run the number of barrels required for home consumption in this single state, up to *nine hundred and ninety-five thousand barrels*. Now we have no means of ascertaining, with anything like accuracy, how many apples are annually produced in this State, but have no idea that it is anything like that amount. If each town in the State should produce three thousand barrels, it would still fall short of the amount required to meet the demand for home consumption. If these suppositions are correct, no fears need be entertained that the supply of apples for many years to come will be greater than the demand for them.

Allowing one barrel of cider to each family in the State for the various purposes in which it is used, for cooking, vinegar, &c., and it would give 199,000 barrels—which at eight bushels to the barrel would make one million five hundred and ninety-two thousand bushels, or one hundred and ninety-nine thousand barrels, making the amount demanded in this State alone, for home consumption, at the very lowest estimate, *one million, one hundred and ninety-four thousand barrels of apples a year!*

So far we have only spoken of what may be used at home—the demand for exportation may, and unquestionably will be, much greater. Baldwin apples are selling in San Francisco for *twenty-five cents each*, and at *thirty-five dollars per barrel!* The orchards of New England will soon be required to meet the demands of this widely-extended and rapidly-peopled country; then the friendly relations and the frequent communications between this country and Mexico, will naturally open a market for our apples there, in exchange for her oranges and other commodities. Indeed, the whole continent, down as far as people congregate in cities, opens a boundless outlet for this cheap and wholesome article of human subsistence. If they attempt its cultivation, and the climate should prove favorable at any point, it will long be an experiment with them, and they must pass the ordeal of borers, blight, accident, want of system and knowledge, and a thousand other difficulties which it is hoped we are about emerging from. All these will have their effect upon them, as they have had upon us, so that the youngest planter here can have no cause of anxiety in relation to a demand for his apple crop.

New England is the great manufactory of ice, and her railroads are the avenues through which it passes to the nations of the East. Since this article of export has been produced, a way has been opened to export our apples with it. Shipped with ice, where the temperature is kept low and equal, apples are transported into the far regions of the East, and sold at handsome profits. It is said that in hot climates they are preferred to any other fruit, and are eagerly sought for wherever they have been introduced. The ports of the Mediterranean alone will require a large supply, after the trade at them is once opened. At this moment a vessel is being loaded with apples and ice, at Charlestown, for Alexandria, in Egypt.

In England, our apples are highly esteemed, selling at from $8 to $12 and $16 a barrel, and by the hucksters at tenpence, and sometimes a shilling each. The rapid communication between this country and that afforded by our steamships and packets, enables the exporter to get them there in perfect condition; consequently they are fast becoming an important article of trade, and are destined to become one of the principal sources of profit to the farmer. An increased supply increases the demand. Apples are *higher* in market in the full-bearing year, than in the odd years when the supply is much less, paradoxical as it may seem. When the crop is large, the natural supposition is, that the price will be low; and shippers entering into the business largely, keep the prices up. A gentleman in New Hampshire informs us that when his orchard came into bearing some 30 years ago, the best market he found for his apples was at Portland. This year he refused $425, for the product of less than an acre and three-quarters, to be taken *on the trees!*

While, then, we would not advise the farmer to neglect his corn and grain crops, to invest extravagantly in apple trees, we *would* recommend to him to plant a few trees of the best varieties every year; but not more than he can manure and cultivate with care.

FALL TRANSPLANTING.

Apple Trees may be transplanted in autumn with perfect success, if they are treated properly. If a hundred trees are planted, that number ought to be expected to live. We have never yet lost an apple tree transplanted in the fall, which was moved and set again under favorable circumstances.

The holes to receive them should be six feet in diameter, the soil thrown out upon the right and the subsoil upon the left, making a depth of eighteen inches, and the bottom of the hole dug and pulverized a spade's depth more. Then, as the surface soil is returned to the bottom of the hole, mingle with it a small wheelbarrow load of well rotted compost; this will fill the hole nearly to a level with the surrounding ground, and prepare it for the tree. If this part of the work is done a week or two before it is intended to set the tree, it will be something better.

The next step, and one which requires the utmost care, is, to take up the trees from the nursery,—and this never should be entrusted to inexperienced

hands; or even to *experienced* persons, if careless and in a hurry. No care of preparing the soil, or of placing the tree in it, will atone for cracked stems or mutilated roots. After removing the surface of the earth, the tree should be gently raised, which will indicate the direction of the roots, and enable the operator to remove them carefully by hand. When out of the ground it is better that the sun and wind should never strike them, though, they may be exposed for many hours without material injury. In transplanting, set them on a level with the surrounding ground, spreading the roots in every direction in the hole. The tree ought to be placed on a slight mound with the roots slightly dropping around it, rather than in a cavity. Placed in this position, with the pulverized earth sifted about the small fibres or spongioles, and all other matters in relation to it managed as we have suggested, there is no more difficulty in making your apple tree live and flourish, than there is in producing any common farm crop. Two persons are required to do the work with ease.

This is all that is necessary in transplanting apple trees—there is no other secret about it. No beginner need anticipate a failure if he adopts these plain suggestions.

For the New England Farmer.

NEW ENGLAND AND THE WEST.

A COMPARISON BETWEEN THEM, IN AN AGRICULTURAL POINT OF VIEW.

BY AGRICOLA.

The question whether the Western States possess, for the farmer, superior advantages to the Eastern, is often asked, and notwithstanding it may seem strange that there should be any doubt in relation to the answer to so simple a query, yet there seems to be a division of opinion; some maintaining that the advantages of the West, everything being considered, greatly outweighs those of the Atlantic States, while others are equally as confident that the advantages of the latter preponderate.

Although I may differ from a majority of my *Yankee countrymen*, yet I think I have sufficient reason for planting myself upon the broad ground, that, all things being taken into consideration, the Western country is *very much* better adapted to agricultural purposes than New England; nay, that a *vast many* of our New England farmers would greatly better their condition by removing westward, although they have what is generally called a "pretty good farm," and are "out of debt."

When it is realized that farmers in this part of the country are obliged to work one-half of the whole time in providing for their neat stock, and when it is considered that cattle at the "West" almost entirely supply their own wants, that they need scarcely any care from their owners, as some winters they receive nothing from the barn, while in most cases hay need not be given them only during an occasional storm,—it must be admitted that the Western farmers possess a vast superiority over those of the East as regards one invaluable "*item*,"—the saving of time. Perhaps it may be said, that to assert that six months are employed in taking care of cattle is all "gammon," as to do this during the cold season takes but a small part of the time, and that he has an abundance of time for other work. Now it must be admitted that our farmers go to the barn, to attend to their cattle, on an average of five or six times each day for five months; but suppose it does not employ more than a third of the time, the state of the farm is such, being covered with snow for at least several months every year,—there is little else necessary to be done, except *to provide fuel and takecare of the fire*.

Here is another disadvantage to which the Western farmer is not subjected only in a measure; for it being generally moderate weather there, much less fuel is needed, and of course as much less labor is rendered necessary.

And also our hardest month's work, haying, is almost unknown among the farmers of the West. As in proportion to their cattle they do not need perhaps one-tenth of the hay which is necessary for us.

Thus the farmer of New England is employed during five or six months, in doing that which the farmer in the West can almost entirely dispense with. And of course the latter has so much longer time to make improvements upon his farm; or else to acquire property, in the same proportion as he gains the more time, the more rapidly.

But it seems to me that even if the Western farmer could have no more time to cultivate his land than his Eastern brother, he would possess a decided advantage over the other.

Our farmers here in New England cannot, perhaps, with their other work, "carry on" each with hiring extra assistance,—more than five acres of corn, and at the same time raise other provision sufficient only for his own consumption. We do not, I think, raise in general above thirty bushels on an acre. Five acres at thirty bushels per acre would be 150 bushels, which at 75 cents, the average price, perhaps, would make $112,50. A man who clears by means of his crops $112,50, above what is necessary for his own use, does as well as farmers generally in New England.

In many parts of the Western country a man can cultivate and harvest, as well as market the proceeds of, *thirty acres* of corn, which may average fifty bushels per acre; which will give 1500 bushels. And this at one-third of a dollar per bushel would make $500. Hence in this one item he would gain in one year over his Eastern brother, $387,50; for the Western man could, perhaps, raise enough for family consumption, "over and above" the 1500 bushels corn. And again, it is not uncommon for farmers in the West to possess from 30 to 100 head of cattle, which are worth from a third to half as much as here; while farmers here do not in general own more than from 12 to 20 head. Here is another source of considerable profit with little expense.

Much has been said against the climate of the Western States, but I believe I am safe in saying that many parts are healthy—almost equal to New England.

I know that it has been often intimated that the state of society is such at the West that a "virtuous" man would be disgusted to reside there; but if the Western people are as bad as some have represented, it is the duty of many of our *upright* citizens to take up their residence among them, that

by "precept and example" they may work a reform among that "deluded people." But if, as I maintain, the character of the people of the West will well compare with those of many parts of our "happy New England"—then there need be no fears on that ground. Thus, Mr. Editor, I have given you a few brief, disconnected thoughts; and if I have said enough to elicit a discussion on the subject in your columns, and induce you to give your opinion in relation to it, my wish is accomplished. AGRICOLA.

REMARKS. Our correspondent opens a broad field for discussion. We have always considered it a safe maxim to "let well enough alone." If a farmer is comfortably established, owns the house over his head, and the land under his feet, is acquiring a good living, and making "both ends cleverly meet," he had better ponder well some of Dr. Franklin's wise sayings before he breaks up his home and severs all his early associations in order to go to the West, or anywhere else. Take away our rugged hills, hard fields and rough climate, and supply them with the broad prairies and milder skies of the West, and our thrifty, energetic, New England character, would gradually die out. We have always supposed that the *necessity* for labor has been the philosopher's stone which has subdued the rough nature about us and turned our ice and granite into gold. As we go down South, we find people less and less inclined to labor, until we come to a climate where the spontaneous productions of the earth are sufficient to sustain life, and there we find very little labor performed.—Civilization is in a low degree, there being, at first, no exciting cause to impel man to action in order to provide himself with food and shelter. Wherever the necessity for exertion exists, and man enters at once into active fields of labor, his ambition is aroused, and he earnestly strives for distinction among the active beings around him. This spirit of emulation increases as it rolls onward; improves every science and art, and makes what is called a high state of civilization.

We have had some experience of Southern and Western winters; they are damp, with cold, cutting winds; the roads are mud and water, or rough with frozen ruts, and we found them more trying than our steadily cold and dry atmosphere.

For the New England Farmer.

BLOODY MILK.

GENTLEMEN:—My cow has been giving bloody milk since July last. Will you have the goodness to let me know through the columns of your valuable periodical—the New England Farmer—the cause of this disease, and inform me how to cure it; and thereby confer a great favor on the public, and very much oblige,

Your obedient servant, J. E. UPHAM.

Harvey, Albert Co., New Brunswick, Sept. 8, 1851.

REMARKS.—It is somewhat doubtful whether we shall be able to make a satisfactory reply to the queries of our correspondent. We have examined all the books to which we have had access, both American and English, and do not find the subject of "bloody milk" alluded to, in any of them. Most of the experienced farmers with whom we have conversed, state it as their opinion that bloody milk is occasioned by some external injury to the udder, either by a blow, being trodden upon by other cattle, or perhaps, by sudden cold. Either of these may be sufficient to produce a rupture of some of the small blood-vessels, or induce inflammation in such a degree as to prevent a natural secretion of the fluids. Milk is so nearly allied to blood, that a slight disarrangement of the secretory glands might suffer the juices to pass off *together*, before being elaborated either into pure blood or milk. It is not impossible, however, that the difficulty may be occasioned by injury upon some other part of the body, or by some general disease.

The Garget, we believe to be a disease unlike the one in question. In that disease the milk usually coagulates in the bag, and causes local inflammation where it lodges, and is attended with more or less fever. The udder becomes hard, and filled with lumps, and the teats enlarged and sore. Cows give bloody milk without any of these symptoms, and even without any soreness of the udder; still, we are not certain that it is not the same disease in another form.

As the cause of bloody milk is not given in the best works upon the cow and her diseases, we are led to suppose that no certain knowledge exists on the subject.

The remedies suggested by experienced men, are, careful treatment and feeding, fomentations of the udder with cold water; if fever is apparent, a dose of physic, and the milk drawn off gently, but completely, twice a day.

We hope some of our friends intimately acquainted with the physiology of the cow, will enlighten us on the subject.

For the New England Farmer.

FARMERS' FESTIVAL AT AMHERST.

BY, P.

It was my privilege to witness the movements of the farmers of the County of Hampshire, on the 22d of October. I say interesting, for such has been the organization of societies in this section of the county, that hitherto they have felt themselves in a measure, one side of all accommodations—although, in fact, very centrally situated.

The rain of the night previous probably checked the ardor of many, who would have added to the show; nevertheless, early in the morning, the assemblage commenced, and before ten o'clock, A. M., the entire area of the extended common north of the college eminence was covered with strings of cattle.

Our attention was particularly arrested by a magnificent team of 96 yoke of oxen, drawing 180 of the farmers of Belchertown, accompanied by a

band of music. When a spirit like this is awakened, it is not difficult to make a show. Many other towns sent in large numbers of working cattle, so that we should estimate not less than 200 pair present. Of other animals the display was good. Among them fat cattle from Deerfield, one pair of which weighed 4500 lbs., about 30 pair of steers, 8 bulls, 7 milch cows, swine, 5 calves, sheep many, and a *twin family*, of which a story was told at table, that particularly arrested the attention of the ladies present; what may be the effect upon their imaginations, can only be determined hereafter. Some 70 or 80 horses were displayed, in vehicles of every form; many of these appeared to be superior animals. The plowing match was well contested with about 20 teams. Two plows of peculiar structure were seen in the fields—one the plow that cuts two furrows at the same time, leaving the earth in a highly favorable condition for cultivation; the other moving on a large *iron roller* on the land side, which was said to lessen the power required to move it, and to facilitate the operations in stony lands. These facts are noticed, because any improvement that leaves the land in better condition, or relieves the team in plowing, is worthy of particular attention.

In the halls there was a very handsome exhibition of fruits and flowers, considering the lateness of the season. Rarely have we seen a better show of apples. The bread and butter, too, spoke well for the ladies who made it; and what was still better, the ladies themselves were there with neatly arranged locks and smiling faces. When it shall be fully understood, that these agricultural fairs are to be *arenas* for ladies to display themselves, and the works of their hands, we cannot doubt there will always be spectators enough present. It was particularly gratifying to find learned professors and reverend divines, and gentlemen of other professions, lending a helping hand. In fact, all were ready to contribute. The hospitality of the citizens was without limitation. When such a spirit prevails, the show cannot be otherwise than good.

The address was by that distinguished cultivator and friend of the farmer, Hon. M. P. Wilder, of Dorchester. It is enough to say, that it was worthy of his well-earned reputation. Born in this mountain region, the impressions of his youth have been constantly vivid in his mind, and now favored with a prosperous career in the city, he is happy in contributing to make the laborers on his own hills in easy condition, and to teach them how their sons may, by their own well-directed industry, become independent.

The dinner hall was entirely filled, and so were all that entered it. Here the intelligent President of the society acquitted himself with much modesty and propriety. Among the guests were several gentlemen of distinction from the vicinity and other societies;—al. of whom appeared highly gratified with what they had seen and heard. If their first exhibition by this newly incorporated society is to be taken as a sample, of what the farmers of Hampshire intend to do, other societies will have to be looking about, or they will soon be in the back-ground.

We have heretofore had some *query* in our mind about the expediency of multiplying societies of this kind; but so long as we can be well assured of such exhibitions, as have been the present year at Barre, at Fitchburg and at Amherst—we say to them go-ahead, and God bless the farmers in their efforts to improve. May our Legislators be wise enough to understand that it should be no less their pleasure than their *duty*, to provide for the well-being of the farmers. If they do not *voluntarily* take this lesson—they will find others duly authorized to take *their places*. P.

October 24, 1851.

A GOOD GARDEN.

No branch of husbandry is more neglected than the garden. Those farmers who live too far from market to indulge often in the luxury of fresh meat, are still content to dine on salt pork or beef, with the addition of potatoes only, rather than devote a few hours to a kitchen garden. Both health and good taste demand that a farmer's table should contain a full variety of vegetables. Radishes, lettuce, cauliflowers, beans, peas, tomatoes, beets, turnips, and indeed many others, should be found there in the proper seasons, while melons and the small fruit will furnish the evening's board with healthful luxuries.

Raspberries, strawberries and blackberries, may be grown almost without labor, and with due attention, their improvement in quality will fully compensate for the pains taken.

If farmers wish their children to be fond of home, they should at least furnish them with such luxuries as every journeyman mechanic would purchase in the large cities for the use of his family, particularly when he can do so at comparatively little cost.

☞ We copy the above from the *Journal of Agriculture*, and commend its teachings to all who like a good garden—and who should not? As a general thing, farmers underrate the value of a garden, supposing that their time may be devoted to the heavier crops with more profit. But a plentiful supply of vegetables, such as early potatoes, peas, beans, beets, &c., together with an abundance of small fruits, will require but little time and labor, will keep conveniently low the butcher's bill, and add greatly to the health and comfort of the family.

AGRICULTURIST'S ALMANAC.

Beside telling us how fast Time and the Tide flies, and the timely admonition to "look out for thunder and lightning about this time," with sundry other sage advices, there is no predicting how much good an Almanac may do. It is caught up a thousand times in the year, while waiting for dinner, resting during a rainy hour, or for consulting its wise pages for the *moon's influence upon fresh pork*, and thus being consulted so much, it ought to enforce its precepts as with a forty horse dower! An Almanac *is* a good thing—that's certain—one of them makes us laugh, another teaches us how to reckon our *interest money!* while others are full of comforting prognostications of wind and weather, and the operations of the elements in the skies. But this, that we speak of now, has more to do with the lower world, and discourses wisely

of the things most intimately connected with the particular duties and interests of the farmer; such as his health, mental development, moral improvement, the economy of farming, classification of soils, management of soils, winter employment, and care of farming tools.

We consider this almanac as a valuable hand-book, or text-book, for the farmer, and if widely circulated, will lead the minds of many young men into the pursuits of agriculture in a more thorough and systematic manner. With this introduction to the reader, in a few extracts, we let it speak for itself:—

Botany.—This science, whether contemplating the systematic arrangement of plants, or the mutual relations and uses of their parts, is intimately connected with agriculture. Indeed, some knowledge of this science is implied in the rudest condition of this pursuit. The habits, structure, and qualities of plants, the soil and climate best adapted to them, the best mode of culture, and the power of that culture to change and improve them, are all questions in which the farmer is interested.

Chemistry.—This science teaches us that the whole material world with which we are acquainted is made up of varied combinations of from fifty-six to sixty simple substances, and that about twelve or more of these enter, more or less commonly, into the constitution of those vegetables with which the farmer is acquainted, as well as into the constitutions of all those animals which feed on those plants.

Mechanics.—The farmer needs carriages, various tools, especially for cultivation and seed-sowing, reaping, excavation, etc. In the construction of these, reference should be had to the persons using them, the quality of the soil to be cultivated, the facility with which they may be used, and their durability. In nothing does the enlightened agriculture of some nations appear more than in the wisdom of their machinery.

FLAX SEED AS FOOD.

Will you allow me to communicate to the readers of your valuable paper the result of my little experience in the use of flax seed for feeding a saddle horse. I was induced, from reading Mr. Sproule's articles in the *Gazette*, on Flax, and Warner's Systems, &c., for farm horses, to try the experiment with my saddle horse, which has now been fed twelve weeks upon the following diet, and is in excellent condition, with a good coat, notwithstanding the severe weather to which it has been a good deal exposed; for being a surgeon, I am obliged to leave it standing at the doors of my patients continually:—

6 stone (of 20 lbs.) of wheat straw, at 6d	3s. 0d.
½ stone good hay, at 13d	0 6½
½ score bran,	0 6.
7 lbs ground linseed, at 3d	1 9.

These are retail prices, and include straw for bedding, which, however, is economized by being put under the manger during the daytime. Upon this my horse has, of course, done easy work; it has, however, only been four days in the stable, and has averaged eight miles a day for the last twelve weeks. I have also a drawback on the manure, which, at the price here, will, I think, reduce the cost of keep to 5s. a week. I should state that my apparatus is neither extensive nor expensive. I boil in a five quart pan a gallon of water, with a half pound of good linseed and a little salt, a common butter firkin being filled with the chaff, (straw and hay) mixed with the proportion of bran; the boiling linseed is poured over it, and well mixed with a broomstick, more chaff being added as it settles after standing an hour or two; this is given at night, and a second supply (the operation being repeated with a little more chaff) stands all night, and affords the animal as much as he can eat the whole of the next day; the salt increases her relish.—*The Plow, Loom and Anvil.*

Potato Digger.—Among the implements of farm labor exhibited at the Manchester Fair was a wagon with machinery attached for gathering potatoes—the recent invention of a New Hampshire farmer. The wagon is placed at one end of the potato field, with oxen or horses attached, and as it passes down the rows, digs the potatoes, separates them from the dirt, and *loads them in the wagon.*

Not Much Trouble to Try It.—To raise an orchard of grafted fruit without grafting! How can it be done? Select the kind of fruit you desire, then take a linen string and tie it as near the top as may be. Let it remain one year, then you have above the string one year's growth. Over the string will form a bulb; cut off just below and set in the ground, and from the bulb will start out roots, and soon trees of a dwarfish size will be seen growing under a burden of fruit.

Mechanics' Department, Arts, &c.

For the New England Farmer.

TO HARDEN STEEL WITHOUT SPRINGING.

Mr. Editor:—I read with much interest in your last paper a short article under the above head. I agree with the writer in the main—that steel should be heated as uniformly as possible, and at the lowest heat at which it will harden—that it should be dipt into the water perpendicularly, for if obliquely, as he justly remarks, the under side will chill first, and as it contracts, will draw the upper side which is still soft. We are also cautioned to prevent springing to dip it into the water *slowly.*

It appears to me that reason and experience are against that. I prefer to put it into the water instantly, the quicker the better, more particularly when the piece is to be hardened all over. By this method the sides chill as equally as by the slow process, and the entire surface more so, thus giving it a more even temper, and at the same time, it is less liable to crack in consequence of hammering or from any other cause. Whether this view be correct or not, I cannot see why placing it in the water slowly should prevent its springing in any degree. Yours, &c.,

C. Winslow.

Springfield, Sept. 23, 1851.

☞ Every virtue carried to excess, approaches its kindred vice.

FLAX COTTON.

It is pretty well ascertained that flax can be prepared by cheap chemical action, to be spun and woven with as much facility as cotton itself. Every thing in regard to it must have an interest for all. The following remarks relate to its exhibition at the World's Fair:—

"The flax is exhibited in all stages, from the full grown plant and stalk to the change into cotton, then in yarn, thread, then woven and knit, and mixed with wool in white flannel and satinet cloth, also bleached in purest white and dyed of various colors. It is a perfect achievement. There it is in all these states. If flax can thus be converted into a material capable of being carded, spun, woven, colored, bleached and used in all the ways that cotton can, and the assurance is given that it can, and be a better fabric, and all this at an expense so as to cost much less than cotton—and its estimate is but half of the present price of cotton—it is instantly seen that the discovery is of boundless value. Of there being the conversion, there is no doubt. Here it is exhibited both by the French and English. That it can be converted effectually, at a cost to make it compete with cotton, is stated with strong vouchers. There is little room to doubt it.

Boy's Department.

THE COUNTRY BOY IN THE CITY.

A country boy's first visit to the city is a most momentous occasion; one fraught with more of interest and vivid impressions than most he has to recur to in after years; an occasion never to be forgotten.

Before these days of steam travelling boys not unfrequently attained the age of ten or twelve years before they had beheld the "wonders of the town," and perhaps is the case even now in some instances.

Everything not common to the country, all articles not found in the village grocery, and countless objects which the city lad passes by as hardly worth his notice, he looks upon as wonderful. The noise of wheels upon the pavements, the crowded streets, the gilded signs, and flaming lights in the windows of the druggists, all serve to excite and bewilder him. Objects of interest first noticed after the initiate finds himself within the borders of the city, seem to be most impressive.

A clergyman of my acquaintance said that when a boy of seven years, on returning home after having made his debut, in answer to the numerous interrogatories from his sisters as to what he had seen, &c., much to his surprise and mortification could think of nothing in the confusion of the moment, out of the vast fund of which he supposed himself possessed, but a huge sign, projecting over the street, painted in large letters, "Cash paid for Tallow." I knew a lad once to exhaust his entire stock of the needful, amounting, all told, to sixty-two and a half cents, in the purchase of a small brass kettle with which to surprise and gratify his mother on his return home. This he saw in the door of the first shop he came to, and carried it about the whole of a hot summer day, perfectly satisfied with his investment until he saw the rich display in windows farther up; and then, alas, too late, looking sorrowfully at his kettle, bemoaned the premature disposal of his funds.

As the rustic youth arrives at a proper age, he is sought by the merchant for his counting-room, for it is well known they always have the preference, and I think will be conceded on all hands that in a majority of cases they make the most enterprising and valuable citizens. And many there are who are yearly metamorphosed into city bucks. Various are the causes which may influence him to quit the vocation of his father and seek in the metropolis another, and form new tastes and new associations. He has, perhaps, become tired of the dull routine of country life, and seeks excitement. He has heard of wonderful speculations, and wealth accumulations. His cousin from the city has spent a month with him, whose fashionable attire and delicate complexion he contrasts with his own homespun apparel, and sun brown visage. He has observed with jealous watchfulness the partiality of the village beauty for his formidable rival and is resolved to stand on an equal footing with him. A situation is obtained, and he enters upon the duties of a clerk. He now finds himself in a different atmosphere. For the pure air of the mountain, and the fragrance wafted from fields rich with clover and honey-suckle were his; now a bilious smell of docks, coal gas, and foreign spices, is substituted. The round jacket is exchanged for the premature, long-tailed coat; the open shirt-collar for the starched cravat and perpendicular linen, which places his ears in imminent peril. He must be polite when he wishes to love, and smile when he used to laugh aloud.

Poor boy! Long moments of toil are before thee. Weary, homesick and discouraged shalt thou lie down to rest at night, to dream perchance of the time long passed, when thy days glided peacefully away under the mild sceptre of an indulgent daddy. The morrow cometh, and as yesterday the same detested routine goes on. To open and close the store—numberless menial offices to be performed—bearing the insults of older clerks, and made the scapegoat of all their blunders. But courage, my boy—nerve thyself up to the work—keep down that something which is rising in thy throat and threatening to choke thee—and thy name shall stand on gilded letters over the door from which thou sweepest!—*Portland Transcript.*

Ladies' Department.

THE RIGHTS OF WOMAN.

BY MRS. L. H. SIGOURNEY.

There is much clamor in these days of progress respecting a grant of new rights, or an extension of privileges for our sex. A powerful moralist has said that "In contentions for power, both the philosophy and poetry of life are dropped and trodden down." Would not a still greater loss accrue to domestic happiness, and to the interests of well balanced society, should the innate delicacy and perogative of woman, as woman, be forfeited or sacrificed?

"I have given her as a helpmate," said the voice that cannot err, when it spake unto Adam, in the cool of the day, amid the trees of Paradise. Not as a toy, a clog, a wrestler, a prize-fighter. No, a

helpmate, such as was fitting for man to desire, and for woman to become.

Since the Creator has assigned different spheres of action for the different sexes, it is to be presumed, from his unerring wisdom, that there is work enough in each department to employ them, and that the faithful performance of that work will be for the benefit of both. If he has made one the priestess of the inner temple, committing to her charge its unrevealed sanctities, why should she seek to mingle in the warfare that may thunder at its gates or rock its torrents. Need she be again tempted by pride or curiosity, or glowing words, to barter her own Eden?

The true nobility of woman is to keep her own sphere, and to adorn it; not like the comet, daunting and perplexing other systems, but as the pure star, which is the first to light the day, and the last to leave it. If she shares not the fame of the ruler and the blood-shedder, her good works, such as "becomes those who profess godliness," though they leave no "footprints on the sands of time," may find record in the "Lamb's Book of Life."—*Selected.*

HOUSEHOLD RECEIPTS.

ORANGE CHEESE CAKE.—A quarter of a pound of butter,
A quarter of a pound of sugar,
Three eggs,
A wine glass of milk or cream,
Two ounces of sponge cake,
The rind of one orange grated,
Half a nutmeg,
One table spoonful of brandy, or two of rose water.

Pour the milk or cream over the sponge cake to moisten it. Then stir together your butter and sugar, whisk your eggs, mash the cake very fine, and mix all together with the liquor and spice.

Line your pie plates with paste, fill with the mixture, and bake in a moderate oven.

LEMON CHEESE CAKE.—A quarter of a pound of butter,
A quarter of a pound of sugar,
A wine glass of milk or cream,
Two ounces of sponge cake,
Three eggs,
The grated rind of one and juice of half a lemon.

Slice the cake, and pour over it the milk or cream. Beat the butter and sugar together, and stir into it. Mash the sponge cake very fine, and add to the above. Grate the yellow rind, and squeeze the juice of half a lemon and stir in.

Cover the pie plates with paste, fill with the mixture, and bake in a moderately hot oven.—*National Cook Book.*

THE APPLE.—This is both nutritious and wholesome, and deserving a more prominent place in the catalogue of table fruits than is generally assigned to it. Sweet apples contain a large amount of saccharine matter and are probably more nutritious than the sour varieties. The apple, however, like all other fruits, should never be eaten in an unsound or unripe state, and the fairest and most perfect fruit should always, if possible, be selected for use.

TO BAKE APPLES.—Sweet apples properly baked and eaten with milk are excellent. The best method of baking tart apples is, to take the fairest and largest in size, wipe them clean, if thin skinned, and pare them if the skin is thick and tough; cut out the largest portion of the core from one end, and place the fruit on well glazed earthen dishes or pans with the end which has been cored upwards, and fill the cavity with refined powdered sugar. Then place them in the oven or other apparatus for baking until sufficiently cooked. Take them out, and when cold they are perfectly delicious.

"OUR DAILY BREAD."

A beggar-boy stopped at a rich man's door—
"I am houseless, and friendless, and faint, and poor,"
Said the beggar-boy, as the tear-drop rolled
Down his thin cheek, blanched with want and cold.
"O! give me a crust from your board to-day,
To help the beggar-boy on his way!"
"Not a crust, not a crumb," the rich man said—
"Be off, and work for your *daily bread!*"

The rich man went to the parish church;
His face grew grave as he trod the porch;
And the thronging poor, the untaught mass,
Drew back to let the rich man pass.
The service begun; the choral hymn
Arose, and swelled through the long aisles dim—
Then the rich man knelt, and the words he said,
Were—"*Give us this day our daily bread!*"

☞"No enjoyment," says Sydney Smith, "however inconsiderable, is confined to the present moment. A man is the happier for life from having made once an agreeable tour, or lived any length of time with pleasant people, or enjoyed any considerable interval of innocent pleasure."

☞ The NEW ENGLAND FARMER is published *every other* Saturday by JOHN RAYNOLDS and JOEL NOURSE, at Quincy Hall, South Market Street, Boston.

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